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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/716,548	11/20/2003	Kiyoshi Nakakuki	01-496	5679

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RESTON, VA 20191

EXAMINER

DICUS, TAMRA

ART UNIT	PAPER NUMBER
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1774

DATE MAILED: 06/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/716,548	<b>Applicant(s)</b> NAKAKUKI ET AL.	
	<b>Examiner</b> Tamra L. Dicus	<b>Art Unit</b> 1774	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 April 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 12-22 and 27-35 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 12-22 and 27-35 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>11-20-03</u> . | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

The cancellation of claims 1-1 and 23-26 are acknowledged.

#### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 12, 14, and 22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
3. Claim 12 recites the limitation “the transparent display pattern”. There is insufficient antecedent basis for this limitation in the claim. There are several elements that are transparent prior to this term. Thus, the overall structure is unclear.
4. Claim 14 includes “higher” and “lower” and “larger”, all of which are subjective terms of degree and are indefinite.
5. Claim 22 is not clear as to describe where the toner particles start and finish relative to the transparent base it is printed onto.
6. Claim 27 is not clear as the “plurality of transparent display pattern” formation does not recite what is attributed to this pattern, e.g. the printed toner particles/ink alone (first or second) or both the transparent base film and the printed particles/ink (as the printed particles/ink do not appear to be transparent by themselves).

#### ***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 12-17, 19-22, 27-32, and 34-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,247,429 to Iwase et al. in view of USPN 6663,252 to Fong et al.

Iwase teaches a display board panel with a transparent substrate film (2:10-50), an opaque black layer of printed dot toners (3:30-45) on the base film in patterns (see 21, FIGS. 3 and 4 and associated text). Iwase teaches the density changes (2:30-35) when using the white and black color dots (claims 14, and 16, embraces slop and density perception) being backlit (Abstract).

Iwase teaches white ink and more than one toner particle(s) or ink(s), but does not teach a transparent layer of ink or toner(s), printed patterns or designs disposed as recited per instant claims 12-13, 15-17, 19-22, 30-32, and 34-35.

Fong teaches a display board panel having printed on a clear plastic substrate in parallel and mixed fashion, translucent white ink forming a translucent surface (4:30-45, equivalency to transparent ink) and a dark layer of ink is also adjacent printed in designs such as concentric circles and starburst effects (4: 49-60, overlapping), scales, and indicators (See FIGS 1-2, 4:40-53). Fong teaches the perimeter 44 of horseshoe area 42 being printed in a startburst design (claim 22). Fong shows border lines such as tick marks with ink deposited (FIG 2.). Fong teaches the use of a blue color printed on a transparent substrate (4:29-30, embraces blue of instant claim 21). See also 5:1-20. The variety of colors inherently have different densities (claims 14, 16, 31).

It would have been obvious to one having ordinary skill in the art to have modified the display of Iwase to substitute the design and ink material of Fong because Iwase suggests including not only toner of silver, but of any color at 3:30-45 and Fong teaches the colors and designs help produce a 3-D, metallic look in a display panel (Abstract, 3:40-60, 4: 5-65, 5:1-20). Since both Iwase and Fong teach transparency is desired in order for the backlighting effect to take place, and Iwase already teaches toner can be in any color, and Fong teaches use of transparent or tinted ink in any desired pattern, it would have also been an obvious implication to employ the use of a transparent or colored toner(s) or ink(s) in any color (density) in any design to reach the desired effect. It has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272. Further because the same materials are used, the same visual effects would be expected.

Further to instant claim 27, while Iwase and Fong teach the use of toner and ink, while not teaching ink printed over the layer of printed toner per claim 27, because Iwase toner on the base film and that the toner can be combined with any light reflective color, metallic color, or equivalent color (3:40-45) and Fong teaches these colors in inks, it would have been obvious to one having ordinary skill in the art to have modified Iwase to include a top overprint of ink because Iwase suggests addition of a metallic color and Fong teaches printing metallic colors on displays such as Iwase to provide a 3-D metallic look as taught above. Thus the addition of a second color of ink overprint produces a metallic effect as Fong teaches and would be desired as Iwase suggests.

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9. Claims 18 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,247,429 to Iwase et al. in view of USPN 6663,252 to Fong et al., and further in view of USPN 5,614,290 to Yamaguchi.

10. Iwase and Fong are relied upon above.

11. The combination does not teach further adding a transparent protective layer per instant claims 18 and 33.

Yamaguchi teaches a backlight display panel (col. 2, line 25) having a color pattern of transparent or opaque coloring toner and ink printed on a transparent resin sheet, Yamaguchi teaches transparent or colored ink adjacent to protective film 18 (col. 6, lines 1-5), Iwase does not teach transparent ink is printed on the film or the ink constituted of a plurality of color ink layers.

However, in view of the prior art teachings, it would have been obvious to one having ordinary skill in the art to have modified the combination to include printed transparent ink on a protective layer and constituting color ink layers as claimed because Yamaguchi teaches the transparent and colored ink next to protective films and Iwase teaches printed ink on either side of the substrate is a conventional design for a backlight display.

Claims 18 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,247,429 to Iwase et al. in view of USPN 6663,252 to Fong et al., and further in view of USPN 5,266,427 (Iwase 427).

12. Iwase and Fong are relied upon above.

13. Fong teaches the transparent ink layer on film.

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14. The combination does not teach further adding a transparent protective layer as per instant claims 18 and 33.

Iwase 427 teaches a transparent substrate 1, and yellow, cyan, and black dots in a pattern on the substrate (5:1-20, 5:30-45, F1, FIG. 3 and associated text) and having a protective film over the colorant layer (F2, FIG. 3 and associated text).

It would have been obvious to one having ordinary skill in the art to have modified the combination to include printed transparent ink on a protective layer and constituting color ink layers as claimed because Iwase 427 teaches a transparent substrate 1, and yellow, cyan, and black dots in a pattern on the substrate (5:1-20, 5:30-45, F1, FIG. 3 and associated text) and having a protective film over the colorant layer (F2, FIG. 3 and associated text). See also 4:60-68. In combination, the resultant product would have been obvious to form.

#### ***Response to Arguments***

15. Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

#### ***Conclusion***

16. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

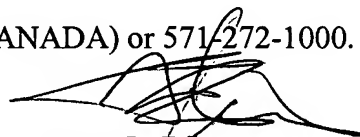
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will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tamra L. Dicus whose telephone number is 571-272-1519. The examiner can normally be reached on Monday-Friday, 7:00-4:30 p.m., alternate Fridays.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on 571-272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Tamra L. Dicus  
Examiner  
Art Unit 1774

June 12, 2006



RENA DYE  
SUPERVISORY PATENT EXAMINER  
A.U. 1774 6/23/06